UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
SPOONER, LAMONT M

ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 April 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed April 21,2004 have been fully considered but they are

not persuasive.

On page 9 paragraph 3 lines 4 and 5, of the amendment, Applicant states neither

Hirota nor Busardo describe producing intonation.

Hiroto teaches on page 6 lines 44-47, the alphabetic portion is read as an

alphabet and the numeral portion is read in a monotone manner. The American

Heritage College Dictionary defines intonation as "the act of intoning", intoning is

defined as "to utter in monotone." The Applicant does not claim a variation in the

prosody/intonation of the alphanumeric characters, claim 1, page 3 line 8, "such that in

use intonation is produced".

On page 10 paragraph 2 lines 3 and 4, applicant states the audio allophones of

Busardo are portions of recorded spoken words (C.3.line 3), not recordings of a spoken

alphanumeric character.

However, in response to applicant's arguments against the references

individually, one cannot show nonobviousness by attacking references individually

where the rejections are based on combinations of references. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231

USPQ 375 (Fed. Cir. 1986).

2.   Claims 1, 2, 4, 5, 7, 9-17, 21- 23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hirota (U.S. Patent No. 6,188,977 Feb. 13, 2001) in view of Busardo

(U.S. Patent No. 6,148,285 Nov. 14, 2000), and further in view of Sakamoto (US Patent

No. 5,027,409 Jun. 25, 1991).

Hirota, Busardo and Sakamoto are analogous art in that they are of the

information synthesis field.

As per **claims 1, 16, 17, 21 and 22**, Hirota discloses a method of playing

recordings of spoken alphanumeric characters in sequences comprising:

receiving a sequence of alphanumeric characters to be played (Fig. 7, C.5.lines

1-4, Fig. 1 item 107 "Input Unit"-Natural Language Sentence)

accessing a template (Fig. 4-the template is the model that recognizes and

matches a pattern, C.2.lines 3, 4) comprising a sequence of fields (Fig 4. "<integer>,

<fraction>"-it would have been obvious, and well known that the information entered into

the pattern matching area is called a field), each field representing part of a sequence of

alphanumeric characters (C.2.line 1-"NL550" represents a string of alphanumeric

characters) and said template comprising information about the manner in which a

sequence of alphanumeric characters is to be played such that in use intonation is

produced (C.6.lines 42-47-the sequence is played in a monotone "manner").

accessing a database of fragments (C.6.line 47-to read the alphanumeric

character recorded fragments as stated "en el faiv" it is necessary to access a database

which contain these specified fragments, C.6.lines 15-17-wherein the notation non-

specific dictionary is the database containing the fragments or pronunciation

information), as spoken at a particular location within an utterance (C.6.lines 45-47-the

location being one character read after the other in the utterance)

for each character in said received sequence of alphanumeric characters

(C.6.line 42 "NL550" is the sequence of characters), selecting a fragment on the basis

of the accessed template (C.6.lines 43-47- "en el faiv faiv ou" are selected based on the

accessed template in the template/dictionary database); and

passing said selected fragments to a player and playing the fragments (C.6.lines

45, 46).

Hirota does not disclose:

each of a plurality of said fragments being a recording of a spoken alphanumeric

character as spoken at a particular location within an utterance;

However, Busardo teaches recording of a spoken set of fragments (C.3.lines 13-

16-"voice actor" records the fragments into a database). Therefore it would have been

obvious, at the time of the invention, to one ordinarily skilled in the art to combine Hirota

with Busardo. The motivation would have been to have a database of spoken recorded

sounds that could be played once related to the input character sequence which would

render a more human like play instead of the well known robotic sounding play.

Hirota in view of Busardo does not disclose:

said database of fragments comprising, for the same alphanumeric character a

plurality of fragments each being a recording of that alphanumeric character as spoken

at a different location within an utterance.

However, Sakamoto teaches having a database (Fig. 1 "Voice-Data Memory

Group) for storing different intonations for the same character as spoken at a different

location within an utterance (C.3.lines 56-67). Therefore, at the time of the invention, it

would have been obvious to one ordinarily skilled in the art to combine Hirota, Busardo

and Sakamoto. The motivation for doing so would have been to provide an intonation

changes depending on the block placement of the fragment in order to improve voice

data output (Sakamoto C.2.lines 34, 35), which would provide the benefit contributing

concise voice data due to tone verification of output (C.1.lines 33, 34, 35) in multiple

situations (C.3.lines 50-55).

As per **claim 2**, Hirota, Busardo and Sakamoto disclose all of the limitations of

claim 1, upon which claim 2 depends. Hirota further discloses:

said accessed template (Fig. 4 "<NL_PRODUCT>") is selected from a database

of templates (Fig. 4) on the basis of the received sequence of alphanumeric characters

(C.5.lines 1-4).

As per **claim 4**, Hirota, Busardo and Sakamoto disclose all of the limitations of

claim 2, upon which claim 4 depends. Hirota further discloses:

at least some of the templates in said database contain specified alphanumeric

characters in at least some of the template fields (Fig. 4 "<NL_PRODUCT>"-the

specified characters in this case are the "N" and "L", it would be obvious to have a

numeric specified character if desired).

As per **claim 5**, Hirota, Busardo and Sakamoto disclose all of the limitations of

claim 4, upon which claim 5 depends. Hirota further discloses:

said accessed template is selected from the database of templates (Fig. 4) by

matching at least some of the received sequence of alphanumeric characters with

specified alphanumeric characters in the template fields (C.2.lines 1-4, Fig. 4 "<NL_PRODUCT>" is matched with C.6.line 42 "NL550").

As per **claim 7**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 2, upon which claim 7 depends. Hirota further discloses:

said database of templates (Fig. 4, C.4.lines 22-24) comprises sets of templates each set being suitable for use with a particular type of alphanumeric character sequence (Fig. 4, C.4.lines 33-38-the types of sequences suitable are integer, fraction, date, onomatopoetic, etc.).

As per **claim 9**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 1, upon which claim 9 depends. Hirota further discloses:

said receiving a sequence of alphanumeric characters further comprises receiving values of one or more parameters (C.4.lines 45-47-the parameters being the entry must be between greater than 1 and equal to or smaller than 12).

As per **claim 10**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 9, upon which claim 10 depends. Hirota further discloses:

said parameters specifies a type of alphanumeric character sequence (C.4.lines 33, 42-44-the specified sequence is month, day, year)..

As per **claim 11**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 1, upon which claim 11 depends. Hirota further discloses:

said alphanumeric character sequence is selected from a date (C.6.lines 20-24).

As per **claim 12**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 1, upon which claim 12 depends. Hirota further discloses:

said database of fragments comprises at least four fragments for a plurality of said alphanumeric characters (C.6.line 46 "en el faiv faiv ou").

Hirota in view of Busardo do not disclose:

having four fragments for each of a plurality of said alphanumeric characters.

However, Sakamoto teaches having four fragments corresponding to the same character (C.8.lines 42-52,ty-11, ty-12, ty-21, ty-22) with different intonations for each. Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Hirota, Busardo, and Sakamoto. The motivation for doing so would have been to divide information notification into tabular form having different intonations corresponding to information position (C.8.lines 31-41).

As per **claim 13**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 12, upon which claim 13 depends. Hirota further discloses:

said four fragments are a recording of an alphanumeric character at each of the following positions within an utterance, where a subgroup is a part of an alphanumeric character sequence; start of a subgroup; middle of a subgroup; end of a subgroup; and end of an utterance (C.6.line 46-"en" is the start, "el" is the middle of the subgroup, "faiv" is at the end of the subgroup, and the space is the end of the subgroup-the space being silence).

Hirota in view of Busardo does not disclose:

said four fragments are a recording of the same alphanumeric character.

However, Sakamoto teaches having four fragments corresponding to the same character (C.8.lines 42-52,ty-11, ty-12, ty-21, ty-22) with different intonations for each.

Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to combine Hirota, Busardo, and Sakamoto. The motivation for doing so would have been to divide information notification into tabular form having different intonations corresponding to information position (C.8.lines 31-41).

As per **claim 14**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 2, upon which claim 14 depends. Hirota further discloses:

if said selected template is incompatible with said received alphanumeric data sequence, then said template is adapted to be compatible with the received alphanumeric data sequence (C.6.lines 62-66-the addition to the template database would then adapt the template to be compatible).

As per **claim 15**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 1, upon which claim 15 depends. Hirota in view of Sakamoto does not disclose:

the alphanumeric character sequence is received, the method of claim 1 completed and the sequence played in real time

However, Busardo teaches the synthesis of speech is completed in real time (C.4.lines 5-7). Therefore it would have been obvious, at the time of the invention to one ordinarily skilled in the art to combine Hirota, Sakamoto and Busardo. The motivation for doing so would have been to have the desired speech information played in real-time due to the alphanumeric data entry which would enable one to compete with the high standards of real-time information processing instead of having a response at a later time.

As per **claim 23**, Hirota, Busardo and Sakamoto disclose all of the limitations of

claim 16, upon which claim 23 depends. Hirota in view of Sakamoto does not disclose:

an automated directory number enquiry system comprising an apparatus as

claimed in claim 16.

However, Busardo teaches having an automated directory number system

(C.4.lines 5-7). Therefore it would have been obvious, at the time of the invention, to

one ordinarily skilled in the art to combine Hirota, Sakamoto and Busardo. The

motivation for doing so would have been to enquire a number from a directory and have

the information processed and synthesized automatically, without having to manually

instruct the system step by step for the acquisition of the desired information.

3.   Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hirota in view of Busardo, in further view of Sakamoto, and in further view of Pirz et al.

(U.S. Patent RE 32,012 Oct. 22, 1985).

Hirota, Busardo, Sakamoto and Pirz et al. are analogous art because they are of

the speech recognition field.

As per **claim 3**, Hirota and Busardo disclose all of the limitations of claim 2, upon

which claim 3 depends. Hirota in view of Busardo, in further view of Sakamoto do not

disclose:

the templates in said database are prioritized.

However, Pirz et al. teaches prioritizing (ordering) templates. Therefore it would

have been obvious, at the time of the invention, to one ordinarily skilled in the art to

combine Hirota, Busardo, Sakamoto and Pirz et al. The motivation for doing so would

have been to process information into voiced representations and having the templates that correspond to the characters prioritized for the purpose of locating frequently used templates faster as they could have a higher priority than infrequently used templates.

As per **claim 6**, Hirota and Busardo disclose all of the limitations of claim 3, upon which claim 6 depends. Hirota further discloses:

said accessed template is selected from the database of templates on the basis of the received sequence of alphanumeric characters (C.5.lines 38-41).

Hirota in view of Busardo, in further view of Sakamoto do not disclose:

said accessed template is selected from the database of templates on the basis of the priority of the templates as well as on the basis of the received sequence of alphanumeric characters.

However, Pirz et al. teaches selecting the template on the basis of its priority (C.4.lines 51-54, 65-68). Therefore it would have been obvious, at the time of the invention, to one ordinarily skilled in the art to combine Hirota, Busardo, Sakamoto and Pirz et al. The motivation for doing so would have been to process information into voiced representations and having the templates that correspond to the characters selected based on prioritization as well as the order of characters received, for the purpose of locating frequently used templates faster as they could have a higher priority than infrequently used templates and having a filtering criteria for the reception of the characters so that desired templates will be accessed that better accommodate the sequence of alphanumeric characters.

4.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirota in

view of Busardo, in further view of Sakamoto, and in further view of Huang et al. (U.S.

Patent No. 5,913,193 Jun. 15, 1999).

Hirota, Busardo, Sakamoto and Huang et al. are analogous art because they are

of the information synthesis field.

As per **claim 8**, Hirota, Busardo, and Sakamoto disclose all of the limitations of

claim 1, upon which claim 8 depends. Hirota in view of Busardo and in further view of

Sakamoto do not disclose:

said template information about the manner in which a sequence of

alphanumeric characters is to be played comprises information about pauses.

However, Huang et al. teaches having information about the manner in which a

string is to be played contains information about pauses (C.4.lines 39-41). Therefore it

would have been obvious, at the time of the invention, to one ordinarily skilled in the art

to combine Hirota, Busardo, Sakamoto and Huang et al. The motivation for doing so

would have been to attempt to eliminate the effect of having two different words or for

example a proper name and a middle initial, pronounced together as one word due to

insufficient pause information.

5.   Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Hirota in view of Busardo, in further view of Sakamoto, and in further view of

Ronca et al. (U.S. Patent No. 6,546,366 filed Feb.26, 1999).

Hirota, Busardo, Sakamoto, and Ronca et al. are analogous art because they are

of the text to speech conversion field.

As per **claim 18**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 16, upon which claim 18 depends. Hirota in view of Busardo and in further view of Sakamoto do not disclose:

said player is provided by an interactive voice response (IVR) system.

However, Ronca et al. teaches having the messaging accessible by an IVR system (C.4.lines 61-66). Therefore it would have been obvious, at the time of the invention, to one ordinarily skilled in the art to combine Hirota, Busardo, Sakamoto, and Ronca et al. The motivation would have been to convert text to speech and allow an interactive voice response system control the player which will enable an user friendly and easy method of communication by the user with the player.

As per **claim 19**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 16, upon which claim 19 depends. Hirota in view of Busardo and in further view of Sakamoto do not disclose:

said processor is integral with an IVR system.

However, Ronca et al. teaches integrating the processing systems (of voice messaging and text messaging) with an IVR System (C.1.lines 60-64, C.4.lines 58-60, 63-66). Therefore it would have been obvious, at the time of the invention, to one ordinarily skilled in the art to combine Hirota, Busardo, Sakamoto and Ronca et al. The motivation for doing so would have been to allow the IVR system to integrate the processing of the information received and synthesized for the purpose of allowing the IVR to encompass or be an integral part of the synthesis while interacting with the user via voice response.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

-        Silverman (US Patent No. 5,890,117 Mar.30, 1999) teaches synthesizing

text from prosodic templates to include alphanumeric information.

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lamont M Spooner whose telephone number is

703/305-8661. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nguyen Vo can be reached on 703/308-6728. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER

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1/23/04